

Appl. No. : 09/844,959
Filed : 04/27/2001

AMENDMENTS TO THE CLAIMS

1-10. (Cancelled)

11. (Currently amended) An integrated circuit comprising an interconnect structure, said interconnect structure comprising

a substrate;

a dielectric layer formed on said substrate, said dielectric layer comprising at least a portion of a hard mask layer, the hard mask layer comprising a patterned organic polymer film wherein a portion of the patterned organic polymer film is fluorinated

a first layer comprising an organic polymer film, and

a second layer which prevents etching of at least a portion of said first layer, said second layer comprising a patterned fluorinated organic polymer.

12. (Currently amended) The integrated circuit as recited in Claim 11, wherein the patterned organic polymer film is second layer comprises a patterned low-K organic polymer film.

13. (Currently amended) The integrated circuit as recited in Claim 11, wherein the patterned organic polymer film second layer comprises a surface and an interior, wherein the surface comprises a fluorinated portion and the interior comprises a non-fluorinated portion has a greater or equal concentration of fluorine in comparison to the interior.

14. (Currently amended) The integrated circuit as recited in Claim 13, wherein a K value of the fluorinated portion second layer is less than a K value of the non-fluorinated portion first layer.

15. (New) The integrated circuit of claim 12, wherein a K value of the low-K organic polymer film is less than about 2.5.

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SUMMARY OF INTERVIEW

Exhibits and/or Demonstrations

None

Identification of Claims Discussed

Claim 11.

Identification of Prior Art Discussed

U.S. Patent No. 7,187,331, issued Feb. 5, 1980, to Hsioh-Lien Ma (hereinafter "Ma"); and U.S. Patent No. 6,066,577, issued May 23, 2000, to Cooney, III et al. (hereinafter "Cooney").

Proposed Amendments

Applicants' representatives proposed amending the claims to clarify the relationship between the organic polymer film (first layer) and patterned fluorinated organic polymer (second layer) comprising the dielectric layer, namely, specifying that the second layer is configured as a hard mask to mask at least a portion of the first layer during etching.

Principal Arguments and Other Matters

Applicants' representatives argued that the claims, amended as proposed, distinguished over Cooney in view of Ma, in that neither Cooney nor Ma disclose a hard mask second layer. Applicants' representatives and Examiner Trinh discussed revisions to the proposed claim amendment, and at the conclusion of the interview, Applicants' representatives agreed to submit an amendment that incorporates claim language specifying that the second layer prevents at least a portion of the first layer from being etched.

Results of Interview

Applicants' representative agreed to amend the claims in accordance with the points raised during the discussion with Examiner Trinh.